



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/010,925	12/07/2001	Toshiyuki Mima	791 176	5613
25191	7590	06/30/2005	EXAMINER	
BURR & BROWN PO BOX 7068 SYRACUSE, NY 13261-7068			KOSOWSKI, ALEXANDER J	
			ART UNIT	PAPER NUMBER
			2125	

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/010,925

Applicant(s)

MIMA, TOSHIYUKI

Examiner

Alexander J. Kosowski

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-7,15 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-7,15 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/31/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

- 1) Claims 1, 3-7 and 15-16 are presented for examination in light of the amendment filed 04/19/05.

Claim Rejections - 35 USC § 112

- 2) The 112 rejections from the previous office action are withdrawn in light of the amendment filed 4/19/05.

Claim Rejections - 35 USC § 102

- 3) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

- 4) Claims 1-2, 4-6 and 15 are rejected under 35 U.S.C. 102(b) as being unpatentable by Hesse et al (U.S. Pat 5,274,571).

Referring to claim 1, Hesse teaches a method for running an electric energy storage system which is set up at an electric energy consumer (col. 2 lines 40-45) and capable of controlling an electric energy to be purchased by the electric energy consumer by controlling charge and discharge (col. 2 line 66 through col. 3 line 18), comprising programming a running pattern of charge and discharge into a computer-control means associated with the electric energy storage system (col. 6 lines 19-31), running the electric energy storage system and controlling the operation of the electric energy storage system thereafter on the basis of the previously programmed running pattern only (col. 4 lines 20-36, whereby overrides may not necessarily change the programmed pattern).

Art Unit: 2125

Referring to claim 4, Hesse teaches that an electric fee is always optimized by observing information on purchase of electric power by the electric energy consumer with a communication means and giving instruction to correct running conditions of the electric power storage system (col. 4 lines 37-50).

Referring to claim 5, Hesse teaches that a scale of the electric energy storage system to be introduced is determined so that an electric energy consumption peak is not generated by shaving the electric energy consumption peak in a time zone having the highest peak of electric energy consumption in a situation of electric energy consumption by the electric energy consumer by increasing an amount of consumable electric energy by discharge running of the electric energy storage system and by charge running of the electric energy storage system in the other time zones (col. 6 lines 49-64).

Referring to claim 6, Hesse teaches that the scale of the electric energy storage system to be introduced is determined so that an electric fee is reduced by increasing a rate of electric energy purchased by the electric energy consumer in a night time zone by discharge running of the electric energy storage system in a daytime zone and charge running of the electric energy storage system in a nighttime zone (col. 3 lines 55-68 and col. 6 lines 49-64, whereby the scheduler determines that loads may be greatest during the daytime whereby, for instance, workers are present and require HVAC, versus nighttime, when HVAC requirements are lessened).

Referring to claim 15, Hesse teaches that the electric energy consumer is the end-user of the electric energy (col. 2 lines 40-45).

Claim Rejections - 35 USC § 103

Art Unit: 2125

5) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6) Claims 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hesse.

Referring to claim 3, Hesse teaches the method above. However, Hesse does not explicitly teach that the running pattern is programmed so that a consumption rate of electric energy stored in the electric energy storage system becomes 80% or more.

It is respectfully submitted that the consumption rate of electric energy stored in the electric energy storage system could be any percentage, including 80%, and the skilled artisan would have found it an obvious modification make the consumption rate 80% or more in the method taught by Hesse with the motivation that a high consumption rate would allow for less dependence on power directly from utility suppliers, particularly during high rate times, which would provide a cost savings.

7) Claims 7 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hesse, further in view of Miyoshi et al (U.S. Pat 6,522,103).

Referring to claim 7, Hesse teaches the method above. However, Hesse does not explicitly teach that the electric energy storage system is a system using a sodium sulfur battery and that the system is run at an energy consumption rate of 80% or greater to maintain a high temperature in the sodium sulfur battery to ensure proper operation..

Miyoshi teaches an energy supply system whereby sodium sulfur batteries are used to store power (col. 1 lines 6-11) and whereby a high consumption rate is maintained to keep the

Art Unit: 2125

batteries within an allowable temperature range (col. 6 lines 12-35) and whereby the efficiency of the system is above 75% (col. 10 lines 6-20).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to utilize sodium sulfur batteries at a consumption rate of 80% or greater in the method taught by Hesse since sodium-sulfur batteries are commonly used to help flatten the load of an electric power line (col. 1 lines 6-11) and since keeping sodium sulfur batteries within an allowable range of temperature and discharge rate allows electric storage without deteriorating the reliability of the sodium-sulfur batter (Mishoshi, col. 6 lines 18-20).

Referring to claim 16, Hesse teaches a method for running an electric energy storage system which is set up at an electric energy consumer (col. 2 lines 40-45) and capable of controlling an electric energy to be purchased by the electric energy consumer by controlling charge and discharge (col. 2 line 66 through col. 3 line 18), comprising programming a running pattern of charge and discharge of the electric energy storage system into a computer-control means (col. 6 lines 19-31), running the electric energy storage system and controlling the charge and discharge of the system on the basis of the previously programmed running pattern only (col. 4 lines 20-36). However, Hesse does not explicitly teach that the electric energy storage system is a system using a sodium sulfur battery, nor that the running pattern is programmed so that a consumption rate of electric energy stored in the electric energy storage system becomes 80% or more.

Miyoshi teaches an energy supply system whereby sodium sulfur batteries are used to store power (col. 1 lines 6-11) and whereby a high consumption rate is maintained to keep the

Art Unit: 2125

batteries within an allowable temperature range (col. 6 lines 12-35) and whereby the efficiency of the system is above 75% (col. 10 lines 6-20).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to utilize sodium sulfur batteries at a consumption rate of 80% or greater in the method taught by Hesse since sodium-sulfur batteries are commonly used to help flatten the load of an electric power line (col. 1 lines 6-11) and since keeping sodium sulfur batteries within an allowable range of temperature and discharge rate allows electric storage without deteriorating the reliability of the sodium-sulfur batter (Mishoshi, col. 6 lines 18-20).

Response to Arguments

8) This response refers to arguments presented by Applicant in the amendment filed 04/19/05.

Referring to applicant's arguments regarding newly amended claim 1, examiner notes that Hesse still reads upon the claims as amended. Examiner notes that Hesse teaches a scheduler which is programmed to charge and discharge an energy storage system. Various factors such as pricing information, temperature, and historical data may be taken into account when programming the scheduler, but do not necessarily affect the pre-programmed schedule. Although an option exists to override the scheduler due to "unforeseeable emergencies", the day-to-day operation of the system taught by Hesse involves the scheduler running the energy storage system based on a programmed schedule of charge and discharge. It is not a requirement that the programmed schedule be changed, and therefore the operation of the energy storage system can be considered to be run on the "previously programmed running pattern only".

Art Unit: 2125

Referring to arguments regarding claim 3, Examiner maintains the argument that it would have been obvious to a skilled artisan to make the consumption rate of the energy stored in the electric energy storage system 80% or more to allow for less dependence on power directly from utility suppliers. An infinite number of programmed running patterns could be input into the system taught by Hess, depending on the desired consumption rate. Applicant argues that the “consumption rate...is based on the temperature requirements of a sodium sulfur battery...”. However, examiner notes that these arguments are based out of the specification, and do not appear in the claim. Therefore, examiner stands behind the rejection and arguments above.

Referring to arguments regarding claims 7 and 16, see the new rejection above.

Conclusion

9) **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

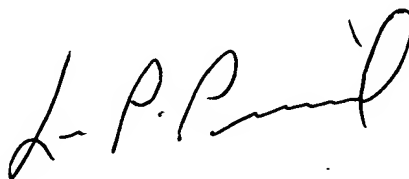
Art Unit: 2125

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander J Kosowski whose telephone number is 571-272-3744. The examiner can normally be reached on Monday through Friday, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on 571-272-3749. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. In addition, the examiner's RightFAX number is 571-273-3744.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Alexander J. Kosowski
Patent Examiner
Art Unit 2125

A handwritten signature in black ink, appearing to read "L. P. Picard". The signature is fluid and cursive, with a large loop at the end.

LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100